

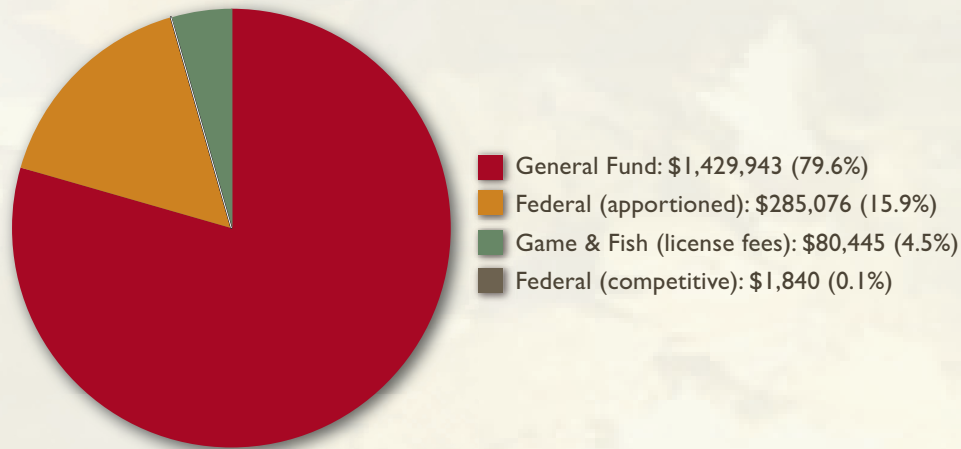
# Wildlife Health





## Fiscal Year 2010

### Wildlife Health Expenditures by Fund Source



### Wildlife Division invested:

- 15,642 hours on bovine tuberculosis efforts;
- 7,507 hours on chronic wasting disease;
- 6,363 hours on avian influenza efforts; and
- 3,631 hours on wildlife health surveys.

### Wildlife Disease

**Avian Influenza** – The Wildlife Division tested 1,465 samples from wild waterfowl during FY 2010. Although a low-pathogenic strain of avian influenza has been found in waterfowl every year since the disease was first discovered in Michigan, it occurs at low levels; the high-pathogenic strain was not detected.

**Botulism** – Both Type C botulism (found largely in puddle ducks) and Type E botulism (found in fish-eating birds such as grebes, loons and some diving ducks) have occurred historically in Michigan. In 2010, thousands of waterfowl died due to Type E botulism, the highest total since 2007.

**Bovine Tuberculosis (TB)** – Michigan is the only state in the nation where TB has been established in the wild deer population. The DNR coordinates TB response efforts with the Michigan Department of Agriculture (MDA) and the United States Department of Agriculture (USDA). Although the incidence of TB has decreased over the last 15 years, it seems to have leveled off, with about a 2-percent prevalence rate in the herd in the prime area of infection – Deer Management Unit 487 in the northeastern Lower Peninsula. Of the 5,309 deer, elk and moose tested for TB in FY 2010, 33 deer tested positive for the disease.

**Chronic Wasting Disease (CWD)** – The Wildlife Division has extensively tested deer and elk for CWD since the discovery of a single deer with the disease in a privately owned cervid facility in Kent County in 2008. During FY 2010, 1,321 deer, elk and moose were tested for CWD, with no cases discovered in either captive or free-ranging animals.

**Eastern Equine Encephalitis (EEE)** – A viral disease that is transmitted by mosquitoes and typically infects horses (and can infect humans), EEE occasionally has been found in Michigan deer at low levels in recent years. Despite a fair number of cases in horses, especially in southwest Michigan, only two cases were documented in deer in 2010, one in Missaukee County and one in Livingston County.

**Epizootic Hemorrhagic Disease (EHD)** – A viral disease transmitted by gnat bites and originally identified in deer in Michigan in 1955, EHD has been found four of the last five years in Michigan. EHD was more widespread in 2010 than ever before, with more than 300 cases identified, mostly in Berrien, Cass and Ottawa counties. Public reports of deer die-offs, especially with dead animals in or near water, alert the Wildlife Division to the presence of the disease. Field staff members then investigate and collect samples, which are sent to the Wildlife Disease Lab for examination.

As with many vector-borne diseases, or those transmitted by insects, climate change is a potential factor affecting the distribution of the vector (insect). EHD may begin to have a larger impact on white-tailed deer mortality in Michigan as changes in the climate become more closely aligned to seasonal (late summer/early fall) patterns of insect activity. Historically, the frequency of hemorrhagic diseases such as EHD has decreased with latitude, whereas the probability of the disease causing mortality has increased. In areas where infections have led to die-offs, they are more likely to occur sporadically – in Michigan EHD was diagnosed twice in 50 years (1955 to 2005) but then occurred four of the next five years (2006-2010). In southern states, hemorrhagic diseases occur more commonly but do not lead to mortality unless a new strain is involved. In these areas of repeated, annual outbreaks of these diseases, deer population growth has not been limited.

**Rabies** – Rabies has been recorded in wildlife species at a rate of 60 to 70 cases annually in the last three years, mostly in big brown bats in the southern part of the state and little brown bats in the northern part of the state. A total of 72 cases was found in 2010, mostly in bats, but six skunks and two red fox also tested positive.

**Feral Swine** – These free-ranging pigs, considered exotic, nuisance species, can carry a number of diseases that can be transferred to humans, domestic animals and wildlife. The DNR works with USDA Wildlife Services and MDA to monitor feral swine sightings, reports of feral swine killed and the submission of samples for disease testing. Of eight animals tested in 2010, one was positive for pseudorabies (a viral disease most prevalent in swine, often causing newborn piglets to die). Testing for classic swine fever, brucellosis, trichinosis and TB were all negative.

**Bats** – The Wildlife Division is continuing to install bat-friendly gates at abandoned mines (to maintain the habitat while protecting human safety) and monitor for white-nose syndrome in bats. This disease - which is lethal to bats and has crossed half the continent in four years – is one of the fastest-moving, most lethal wildlife diseases in North American history. White-nose syndrome has a 50- to 90-percent mortality rate in bats, which have a very low reproductive rate. The Wildlife Division is developing a disease-response plan that will focus on communicating with the public and accelerating the closing of caves to reduce human disturbance. An information poster has been developed and distributed to the local areas where the disease may occur.